

WHAT IS CLAIMED IS:

1 1. A system for monitoring pressure of tires mounted on a vehicle,
2 comprising:

3 a sensor unit installed at each of the tires mounted on a vehicle and
4 including at least a pressure sensor that produces an output representing air pressure of
5 the tire and a transmitting antenna that transmits the output of the pressure sensor;

6 a monitoring unit having a receiving antenna and an alarm section, the
7 monitoring unit receiving the output of the transmitted pressure sensor through the
8 receiving antenna, comparing the output with a predetermined value to determine
9 whether the tire pressure is proper, and informing a result of the determination to an
10 operator by the alarm section;

11 a battery mounted on the vehicle and connected to the alarm section
12 through an ignition switch to supply operating power to the alarm section; and

13 an operating switch installed in a compartment of the vehicle to be
14 operable by the operator for supplying the operating power to the alarm section by
15 connecting the battery to the alarm section, while bypassing the ignition switch.

1 2. A system according to claim 1, wherein the alarm section includes a
2 warning lamp that is lit when the result of the determination indicates that the tire
3 pressure is not proper.

1 3. A system according to claim 1, wherein the alarm section includes a
2 display panel that informs the result of the determination by coloration.

1 4. A system according to claim 1, wherein the monitoring unit informs

2 the result of the determination to the operator with indication of increase/decrease
3 direction of tire pressure adjustment.

1 5. A system according to claim 4, wherein the alarm section includes a
2 display panel that indicates the increase/decrease direction of tire pressure adjustment
3 by an arrow.

1 6. A system according to claim 1, wherein the predetermined value is
2 set based on a recommended cold pressure.

1 7. A system for monitoring pressure of tires mounted on a vehicle,
2 comprising:

3 a sensor unit installed at each of the tires mounted on a vehicle and
4 including at least a pressure sensor that produces an output representing air pressure of
5 the tire and a first transmitting antenna that transmits the output of the pressure sensor;

6 a monitoring unit having a first receiving antenna, a second
7 transmitting antenna and a first alarm section, the monitoring unit receiving the
8 transmitted output of the pressure sensor through the first receiving antenna,
9 comparing the output with a predetermined value to determine whether the tire
10 pressure is proper, and informing a result of the determination to an operator by the
11 first alarm section; and

12 a portable terminal device to be carried by the operator when the
13 operator is outside the vehicle and having a second receiving antenna and a second
14 alarm section;

15 and wherein the monitoring unit transmits the result of the

16 determination to the portable terminal device through the second transmitting antenna
17 and the second receiving antenna to inform the result of the determination to the
18 operator by the second alarm section.

1 8. A system according to claim 7, wherein the portable terminal device
2 includes a third transmitting antenna and a button;

3 and wherein the monitoring unit transmits the result of the
4 determination to the portable terminal device through the second transmitting antenna
5 and the second receiving antenna to inform the result of the determination to the
6 operator by the second alarm section, when an instruction is made by the operator
7 through the button and is transmitted to the monitoring unit through the third
8 transmitting antenna.

1 9. A system according to claim 7, wherein the second alarm section
2 includes a warning lamp that is lit when the result of the determination indicates that
3 the tire pressure is not proper.

1 10. A system according to claim 7, wherein the second alarm section
2 includes a display panel that informs the result of determination by coloration.

1 11. A system according to claim 7, wherein the monitoring unit informs
2 the result of the determination to the operator with indication of increase/decrease
3 direction of tire pressure adjustment.

1 12. A system according to claim 11, wherein the second alarm section
2 includes a display panel that indicates the increase/decrease direction of tire pressure
3 adjustment by an arrow.

1 13. A system according to claim 7, wherein the portable terminal
2 device is one of a remote keyless entry device and a cellular phone (portable phone).

1 14. A system according to claim 7, wherein a frequency of the antennas
2 is set to a same value.

1 15. A system according to claim 7, wherein the predetermined value is
2 set based on a recommended cold pressure.